codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

CX 5/15 **CL 2006/39-FO**
August 2006

TO: Codex Contact Points
Interested International Organisations

FROM: Secretary, Codex Alimentarius Commission
Joint FAO/WHO Food Standards Programme
FAO, Via delle Terme di Caracalla, 00100 Rome, Italy

SUBJECT: **Draft Standard for Fat Spreads and Blended Spreads: Food Additives Section**

DEADLINE: **30 November 2006**

COMMENTS: **To:**

Secretary
Codex Alimentarius Commission
Joint FAO/WHO Food Standards Programme – FAO
Viale delle Terme di Caracalla
00100 Rome, Italy
Fax: +39 (06) 5705 4593
E-mail: codex@fao.org

Copy to:

Mr Paul Nunn
Food Standards Agency, Aviation House, 125 Kingsway London WC2B 6NH
Fax: +44 020 7276 8198
E-mail:Paul.Nunn@foodstandards.gsi.gov.uk

The 19th Session of the Codex Committee on Fats and Oils finalized all sections of the Draft Standard for Fat Spreads and Blended Spreads with the exception of the section on food additives and agreed to hold the Draft Standard at Step 7 and to return Section 4. Food Additives to Step 6 for redrafting by an electronic Working Group coordinated by the Delegation of the United States (ALINORM 05/28/17, paras. 12 and 27).

The Report of the Electronic Working Group is attached. The redrafted Food Additives Section is hereby circulated for comments at Step 6 and consideration by the 20th Session of the Committee on Fats and Oils (London, United Kingdom, 19-23 February 2007)

Governments and international organizations wishing to submit comments should do so in writing (preferably by e-mail) to the above addresses **before 30 November 2006**.

Report of the Electronic Working Group on the Food Additive Section of the Codex Standard for Fat Spreads and Blended Spreads

INTRODUCTION

1. The 19th Session of the Codex Committee on Fats and Oils (CCFO) (2005) established an electronic working group (eWG) to discuss food additive provisions in the Codex Draft Standard for Fat Spreads and Blended Spreads. The CCFO agreed that the United States of America would coordinate this working group.[1]

2. The Codex Secretariat, through e-mail (August 2005), invited all Codex Members and observers to participate in this eWG. The following Codex Members and Observers expressed an interest in participating: Australia, Brazil, Chile, Denmark, European Community, Lithuania, Poland, Uganda, Fédération de l'industrie de l'huilerie de la CE (FEDIOL), International Council of Grocery Manufacturers Association (ICGMA), and the International Federation of Margarine Associations (IFMA). The eWG corresponded in English through electronic means.

3. The eWG report builds on the previous work of the CCFO on this Codex standard,[2] the Codex General Standard for Food Additives (GSFA) (Codex Standard 192), and decisions by the Codex Alimentarius Commission (CAC). The 28th CAC (2005) stated that the GSFA would become the single authoritative Codex reference point for food additives when it is completed.[3]

4. The 18th CCFO agreed[4] on the following general principles for the food additives section of the standard for fat spreads and blended spreads:

    a. The section should refer to the Codex General Standard for Food Additives (GSFA),
    b. Only those additives assigned a full ADI by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and an INS number should be considered for inclusion in the standard, and
    c. The section should contain the names of the functional classes as they appear in the INS system.

5. When developing its recommendations, the eWG considered the structure of the GSFA's food additive tables (Tables 1, 2, and 3), the adoption by the CAC of food additive uses contained in the GSFA, and the following principles agreed to by the CCFAC for developing the GSFA's food additive tables.

    a. The food additive functional class names described in the Codex Guideline for the Class Names and International Numbering System for Food Additive (INS) (CAC/GL 36) should be used.
    b. The use of an additive must always be technologically justified in accordance with Section 3.2 of the GSFA Preamble.
    c. Good Manufacturing Practice Principles described in Section 3.3 of the GSFA Preamble apply in all cases.
    d. Additives assigned a numeric ADI by JECFA should, in principle, be assigned a numeric maximum use level. Provisions for these additives are reported in Tables 1 and 2 of the GSFA.
    e. Additives sharing the same numeric group ADI assigned by JECFA should be grouped in the GSFA so that the acceptable maximum use levels for each GSFA food category apply to the group, in order to ensure that the group ADI is not exceeded.
    f. Additives assigned an ADI "Not Specified" or "Not Limited" by JECFA are reported in Table 3 of the GSFA. Their use is limited by the principles of technological need and GMP outlined in Sections 3.2 and 3.3 of the Preamble to the GSFA.

[1] ALINORM 05/28/17, Para. 12
[2] ALINORM 03/17, App. IV; CL 2004/1-FO; and CX/FO 05/19/3
[3] ALINORM 05/28/41, Para. 144
[4] ALINORM 03/17, Para. 42

RECOMMENDATIONS

6. The recommendations of the eWG for Section 4.0 of the Food Additives Section of the Codex Draft Standard for Fat Spreads and Blended Spreads are contained below and consist of four parts:

    Part I: Flavours
    Part II: Technologically justified food additive functional classes.
    Part III: Acceptable maximum use levels for additives assigned a numeric ADI by JECFA.
    Part IV - Additives assigned an ADI "Not Specified" or "Not Limited" by JECFA

Part I - Flavours

Recommendation 1

7. The working group recommends that the CCFO endorse the following text for inclusion in the food additive section of the Codex Draft Standard for Fat Spreads and Blended Spreads

    "Flavours
    Natural flavouring substances, nature-identical flavouring substances, and artificial flavouring substances."

Part II – Food Additive Functional Classes that are Technologically Justified

Recommendation 2

8. The working group recommends that the CCFO endorse the following food additive functional classes as technologically justified for use in foods conforming to the Codex Standard for Fat Spreads and Blended Spreads and include them in the food additive section of this standard.

    a. Acidity Regulators,
    b. Antifoaming Agents,
    c. Antioxidants,
    d. Antioxidant Synergists,
    e. Colours,
    f. Emulsifiers,
    g. Flavour Enhancers,
    h. Packing Gases,
    i. Preservatives,
    j. Stabilizers, and
    k. Thickeners.

Part III – Acceptable Maximum Use Levels for Additives Assigned a Numeric JECFA ADI:

9. The working group was able to reach consensus in support of a number of food additive provisions for inclusion in the food additive section of the Codex Draft Standard for Fat Spreads and Blended Spreads. For some food additive provisions, the working group identified additional information that the CCFO needs to resolve in order to reach consensus. The additional information needed is indicated in the table below under Recommendation 3. The Committee may wish to discontinue further consideration of these additives if the additional information is not provided.

Recommendation 3

10. The working group recommends that the CCFO reach consensus on the acceptable maximum use levels for the following food additive provisions for inclusion in the food additive section of the Codex draft standard for Fat Spreads and Blended Spreads.

    "The following acidity regulators, antifoaming agents, antioxidants, antioxidant synergists, colours, emulsifiers, preservatives, stabilizers, and thickeners are acceptable for use in foods conforming to this standard."

INS No.	Additive	Maximum Use Level	Additional Information Requested
Acidity Regulators			
355, 356, 357, 359	Adipates	3000 mg/kg	Explanation of the technological need for this additive
262(ii)	Sodium Diacetate	1,000 mg/kg	
334; 335(i), 335(ii); 336(i), 336(ii); 337	Tartrates	100 mg/kg (as tartaric acid)	
338; 339(i), 339(ii), 339(iii); 340(i), 340(ii), 340 (iii); 341(i), 341(ii), 341(iii); 342(i), 342(ii); 343(ii), 343(iii); 450(i), 450(iii), 450(v), 450(vi); 451(i), 451(ii); 452(i), 452(ii), 452(iv), 452(v); 542	Phosphates	1,000 mg/kg (as Phosphorus)	
Antifoaming Agents			
900a	Polydimethylsiloxane	10 mg/kg (frying purposes, only)	
Antioxidants			
304, 305	Ascorbyl Esters	500 mg/kg (as ascorbyl stearate)	
320	Butylated Hydroxyanisole	200 mg/kg (fat or oil basis) singly or in combination.	Justification for whether it is necessary to restrict the use “For professional manufacture of heat treated foods”
321	Butylated Hydroxytoluene		
310	Propyl Gallate		
319	Tertiary-Butylhydroquinone		
388, 389	Thiodipropionates	200 mg/kg (as thiodipropionic acid)	Explanation of the technological need for this additive
306, 307	Tocopherols	500 mg/kg	
Antioxidant Synergists			
385, 386	EDTAs	100 mg/kg (as anhydrous calcium disodium EDTA)	
384	Isopropyl Citrates	100 mg/kg	Explanation of the technological need for this additive and whether the maximum use level should be 100 mg/kg
Colours			
120	Carmines	500 mg/kg	
160b	Annatto Extracts	100 mg/kg (as total bixin or norbixin)	
161g	Canthaxanthin	300 mg/kg	
150b	Caramel Colour Class II	20,000 mg/kg	Clarification of the basis of the proposed maximum use levels
150c	Caramel Colour Class III	20,000 mg/kg	
150d	Caramel Colour Class IV	20,000 mg/kg	
160a(ii)	Carotenes, Vegetable (Natural carotenes)	1000 mg/kg	
100(i)	Curcumin	10 mg/kg	
160a(i)	Beta-carotene (synthetic)	1000 mg/kg	
160e	Beta-Apo-8’-	1000 mg/kg	

INS No.	Additive	Maximum Use Level	Additional Information Requested
	Carotenal		
160f	Beta-Apo-8'-Carotenoic Acid, methyl or ethyl ester	1000 mg/kg	
101(i), 101(ii)	Riboflavins	300 mg/kg	Explanation of the technological need for this additive
Emulsifiers			
472e	Diacetyltartaric and Fatty Acid Esters of Glycerol	10,000 mg/kg	Explanation of the technological need for this additive
475	Polyglycerol Esters of Fatty Acids	5,000 mg/kg	
476	Polyglycerol Esters of Interesterified Ricinoleic Acid	4,000 mg/kg	
432, 433, 434, 435, 436	Polysorbates	10,000 mg/kg (singly or in combination)	Justification for whether it is necessary to restrict the use "For baking purposes only"
477	Propylene Glycol Esters of Fatty Acids	20,000 mg/kg	Explanation for why a maximum use level of 10,000 mg/kg is not adequate and a justification for whether it is necessary to restrict the use for "Baking purposes only"
491, 492, 493, 494, 495	Sorbitan Esters of Fatty Acids	10,000 mg/kg (singly or in combination)	
481(i), 482(i)	Stearoyl-2-Lactylates	10,000 mg/kg (singly or in combination)	
484	Stearyl Citrate	100 mg/kg (fat or oil basis)	Request explanation of the technological need for this additive
474	Sucroglycerides	10,000 mg/kg	Justification for whether it is necessary to restrict the use "For baking purposes only"
473	Sucrose Esters of Fatty Acids	10,000 mg/kg	Justification for whether it is necessary to restrict the use "For baking purposes only"
479	Thermally oxidized soya bean oil interacted with mono and diglycerides of fatty acids)	5,000 mg/kg (in fat emulsions for frying or baking purpose, only). For frying purposes only	
Preservatives			
210, 211, 212, 213	Benzoates	1,000 mg/kg (singly or in combination (as benzoic acid))	Request explanation of the technological need for this additive as sorbic acid can adequately preserve such products.[5]
200, 201, 202, 203	Sorbates	2,000 mg/kg (singly or in combination (as sorbic acid))	
Stabilizers and Thickeners			
405	Propylene Glycol Alginate	3,000 mg/kg	

[5] One member of the working group provided the following justification for the use of benzoates in blended fat spreads: Benzoates are technologically needed as a preservative in reduced fat products. In these products, water activity is higher which creates a suitable environment for bacterial growth. For these microorganisms, benzoates are more effective as a preservative than sorbates. In addition, in low pH foods, benzoates are more effective than sorbates as a preservative.

Part IV - Additives Assigned an ADI "Not Specified" or "Not Limited" by JECFA

Recommendation 4

11. The working group recommends that the food additive section of the Codex Draft Standard for Fat Spreads and Blended Spreads reference Table 3 of the GSFA (Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP) to indicate those food additives that can provide the following functional effects by stating the following:

    "Acidity regulators, antifoaming agents, antioxidants, antioxidant synergists, colours, emulsifiers, flavour enhancers, packaging gases, preservatives, stabilizers, and thickeners used in accordance with Table 3 of the Codex General Standard for Food Additives are acceptable for use in foods conforming to this standard."

12. Based on the INS and Table 3 of the GSFA, by endorsing Recommendation 4 the food additives listed in Annex I would be acceptable for use in foods conforming to the Codex Fat Spreads and Blended Spreads Standard.

Annex I

The following table lists the food additives in Table 3 of the GSFA recognized in the Codex INS as providing the food additive functional classes (e.g., Acidity Regulators, Antifoaming Agents, Antioxidants, etc.) corresponding to the functional classes in Recommendation 1. Because the INS associates, in most cases, several functional classes with individual food additives, individual additives may be listed under more than one functional class in the table below.

The Codex Alimentarius Commission has adopted the list of food additives in Table 3 of the GSFA for use in foods generally under GMP, with the exception of certain food categories.[6]

INS	Additive	Maximum Use Level
Acidity Regulators		
260	Acetic Acid, Glacial	GMP
264	Ammonium Acetate	GMP
503i	Ammonium Carbonate	GMP
380	Ammonium Citrate	GMP
503ii	Ammonium Hydrogen Carbonate	GMP
527	Ammonium Hydroxide	GMP
328	Ammonium Lactate	GMP
263	Calcium Acetate	GMP
333	Calcium Citrates	GMP
578	Calcium Gluconate	GMP
526	Calcium Hydroxide	GMP
327	Calcium Lactate	GMP
352ii	Calcium Malate	GMP
529	Calcium Oxide	GMP
330	Calcium Acid	GMP
297	Fumaric Acid	GMP
575	Glucono delta-Lactone	GMP
507	Hydrochloric Acid	GMP
270	Lactic Acid	GMP
504i	Magnesium Carbonate	GMP
580	Magnesium Gluconate	GMP
504ii	Magnesium Hydrogen Carbonate	GMP
528	Magnesium Hydroxide	GMP
329	Magnesium Lactate (DL-)	GMP
296	Malic Acid (DL-)	GMP
261	Potassium Acetates	GMP
501i	Potassium Carbonate	GMP
332i	Potassium Dihydrogen Citrate	GMP
501ii	Potassium Hydrogen Carbonate	GMP
351i	Potassium Hydrogen Malate	GMP
525	Potassium Hydroxide	GMP
326	Potassium Lactate	GMP
351ii	Potassium Malate	GMP
515	Potassium Sulphate	GMP
262i	Sodium Acetate	GMP
500i	Sodium Carbonate	GMP
331i	Sodium Dihydrogen Citrate	GMP
365	Sodium Fumarate	GMP
500ii	Sodium Hydrogen Carbonate	GMP
350i	Sodium Hydrogen Malate	GMP
524	Sodium Hydroxide	GMP
350ii	Sodium Malate	GMP
500iii	Sodium Sesquicarbonate	GMP
514	Sodium Sulphate	GMP
380	Triammonium Citrate	GMP
332ii	Tripotassium Citrate	GMP
331iii	Trisodium Citrate	GMP
Antifoaming Agents		
404	Calcium Alginate	GMP
Antioxidants		
300	Ascorbic Acid	GMP
302	Calcium Ascorbate	GMP

[6] See Codex Standard 192, Table 3.

INS	Additive	Maximum Use Level
330	Citric Acid	GMP
315	Erythorbic Acid	GMP
1102	Glucose Oxidase (*Aspergillus niger* Var.)	GMP
322	Lecithins	GMP
303	Potassium Ascorbate	GMP
301	Sodium Ascorbate	GMP
316	Sodium Erythorbate	GMP
Antioxidant Synergists		
326	Potassium Lactate	GMP
325	Sodium Lactate	GMP
Colours		
162	Beet Red	GMP
150a	Caramel Colour, Class I	GMP
140	Chlorophylls	GMP
171	Titanium Dioxide	GMP
Emulsifiers		
472a	Acetic and Fatty Acid Esters of Glycerol	GMP
1414	Acetylated Distarch Phosphate	GMP
1451	Acetylated Oxidized Starch	GMP
1001	Choline Salts	GMP
472c	Citric and Fatty Acid Esters of Glycerol	GMP
467	Ethyl Hydroxyethyl Cellulose	GMP
463	Hydroxypropyl Cellulose	GMP
464	Hydroxypropyl Methyl Cellulose	GMP
1440	Hydroxypropyl Starch	GMP
472b	Lactic and Fatty Acid Esters of Glycerol	GMP
966	Lactitol	GMP
322	Lecithins	GMP
965	Maltitol (Including Maltitol Syrup)	GMP
461	Methyl Cellulose	GMP
465	Methyl Ethyl Cellulose	GMP
460i	Microcrystalline Cellulose	GMP
471	Mono- and Diglycerides	GMP
1404	Oxidized Starch	GMP
460ii	Powdered Cellulose	GMP
470	Salts of Myristic, Palmitic and Stearic Acids (NH_4, Ca, K, Na)	GMP
470	Salts of Oleic Acids (Ca, K, Na)	GMP
466	Sodium Carboxymethyl Cellulose	GMP
331i	Sodium Dihydrogen Citrate	GMP
1450	Starch Sodium Octenyl Succinate	GMP
413	Tragacanth Gum	GMP
331iii	Trisodium Citrate	GMP
967	Xylitol	GMP
Flavour Enhancers		
1101iii	Bromelain	GMP
623	Calcium Glutamate, Dl-L-	GMP
629	Calcium Guanylate, 5'-	GMP
633	Calcium Inosinate, 5'-	GMP
634	Calcium Ribonucleotides, 5'-	GMP
628	Dipotassium Guanylate, 5'-	GMP
632	Dipotassium Inosinate, 5'-	GMP
627	Disodium Guanylate, 5'-	GMP
631	Disodium Inosinate, 5'-	GMP
635	Disodium Ribonucleotides, 5'-	GMP
968	Erythritol	GMP
620	Glutamic Acid (L+)-	GMP
626	Guanylic Acid, 5'-	GMP
630	Inosinic Acid, 5'-	GMP
1104	Lipase (Animal Sources)	GMP
1104	Lipase (*Aspergillus oryzae* Var.)	GMP
580	Magnesium Gluconate	GMP
625	Magnesium Glutamate, Dl-L-	GMP
624	Monoammonium Glutamate, L-	GMP
622	Monopotassium Glutamate, L-	GMP
621	Monosodium Glutamate, L-	GMP
1101ii	Papain	GMP
957	Thaumatin	GMP
Packing Gases		
290	Carbon Dioxide	GMP

INS	Additive	Maximum Use Level
941	Nitrogen	GMP
Preservatives		
260	Acetic Acid, Glacial	GMP
263	Calcium Acetate	GMP
282	Calcium Propionate	GMP
261	Potassium Acetates	GMP
283	Potassium Propionate	GMP
280	Propionic Acid	GMP
262i	Sodium Acetate	GMP
281	Sodium Propionate	GMP
Stabilizers		
472a	Acetic and Fatty Acid Esters of Glycerol	GMP
1422	Acetylated Distarch Adipate	GMP
1451	Acetylated Oxidized Starch	GMP
1401	Acid Treated Starch	GMP
406	Agar	GMP
400	Alginic Acid	GMP
1402	Alkaline Treated Starch	GMP
403	Ammonium Alginate	GMP
1403	Bleached Starch	GMP
1101iii	Bromelain	GMP
263	Calcium Acetate	GMP
404	Calcium Alginate	GMP
170i	Calcium Carbonate	GMP
410	Carob Bean Gum	GMP
407	Carrageenan	GMP
472c	Citric and Fatty Acid Esters of Glycerol	GMP
468	Cross-Linked Carboxymethyl Cellulose	GMP
457	Cyclodextrin, alpha-	GMP
458	Cyclodextrin, gamma-	GMP
1400	Dextrins, White and Yellow, Roasted Starch	GMP
1412	Distarch Phosphate	GMP
467	Ethyl Hydroxyethyl Cellulose	GMP
418	Gellan Gum	GMP
412	Guar Gum	GMP
414	Gum Arabic	GMP
463	Hydroxypropyl Cellulose	GMP
1442	Hydroxypropyl Distarch Phosphate	GMP
464	Hydroxypropyl Methyl Cellulose	GMP
1202	Insoluble Polyvinylpyrrolidone	GMP
416	Karaya Gum	GMP
472b	Lactic and Fatty Acid Esters of Glycerol	GMP
965	Maltitol (Including Maltitol Syrup)	GMP
461	Methyl Cellulose	GMP
465	Methyl Ethyl Cellulose	GMP
471	Mono- and Diglycerides	GMP
1410	Monostarch Phosphate	GMP
440	Pectins	GMP
1413	Phosphated Distarch Phosphate	GMP
1200	Polydextroses	GMP
402	Potassium Alginate	GMP
501i	Potassium Carbonate	GMP
332i	Potassium Dihydrogen Citrate	GMP
501ii	Potassium Hydrogen Carbonate	GMP
407a	Processed Eucheuma Seaweed	GMP
470	Salts of Myristic, Palmitic and Stearic Acids (NH_4, Ca, K, Na)	GMP
470	Salts of Oleic Acids (Ca, K, Na)	GMP
401	Sodium Alginate	GMP
466	Sodium Carboxymethyl Cellulose	GMP
469	Sodium Carboxymethyl Cellulose, Enzymatically Hydrolyzed	GMP
331i	Sodium Dihydrogen Citrate	GMP
1420	Starch Acetate	GMP
1450	Starch Sodium Octenyl Succinate	GMP
417	Tara Gum	GMP
413	Tragacanth Gum	GMP
332ii	Tripotassium Citrate	GMP
331iii	Trisodium Citrate	GMP
415	Xanthan Gum	GMP
967	Xylitol	GMP

INS	Additive	Maximum Use Level
Thickeners		
1422	Acetylated Distarch Adipate	GMP
1414	Acetylated Distarch Phosphate	GMP
1451	Acetylated Oxidized Starch	GMP
1401	Acid Treated Starch	GMP
406	Agar	GMP
400	Alginic Acid	GMP
1402	Alkaline Treated Starch	GMP
403	Ammonium Alginate	GMP
1403	Bleached Starch	GMP
404	Calcium Alginate	GMP
410	Carob Bean Gum	GMP
407	Carrageenan	GMP
1400	Dextrins, White and Yellow, Roasted Starch	GMP
1412	Distarch Phosphate	GMP
1405	Enzyme Treated Starch	GMP
467	Ethyl Hydroxyethyl Cellulose	GMP
418	Gellan Gum	GMP
412	Guar Gum	GMP
414	Gum Arabic	GMP
463	Hydroxypropyl Cellulose	GMP
1442	Hydroxypropyl Distarch Phosphate	GMP
464	Hydroxypropyl Methyl Cellulose	GMP
1440	Hydroxypropyl Starch	GMP
416	Karaya Gum	GMP
425	Konjac Flour	GMP
461	Methyl Cellulose	GMP
465	Methyl Ethyl Cellulose	GMP
1410	Monostarch Phosphate	GMP
1404	Oxidized Starch	GMP
440	Pectins	GMP
1413	Phosphated Distarch Phosphate	GMP
1200	Polydextroses	GMP
402	Potassium Alginate	GMP
407a	Processed Eucheuma Seaweed	GMP
401	Sodium Alginate	GMP
466	Sodium Carboxymethyl Cellulose	GMP
469	Sodium Carboxymethyl Cellulose, Enzymatically Hydrolyzed	GMP
1420	Starch Acetate	GMP
1450	Starch Sodium Octenyl Succinate	GMP
417	Tara Gum	GMP
413	Tragacanth Gum	GMP
415	Xanthan Gum	GMP
967	Xylitol	GMP